Proposed Standard Channel Nomenclature for the Public Safety Interoperability Channels

Candidate APCO/NPSTC ANS 1.104.1-200x

October 16 – November 30, 2009

Introduction

This document outlines the *Standard Channel Nomenclature for Public Safety Interoperability Channels* as revised in 2009. The requirement for a common naming protocol for public safety's interoperability frequencies was identified in early 2000 by the **Public Safety National Coordination Committee** (**NCC**), a Federal Advisory Committee chartered by the Federal Communications Commission (FCC) that operated from 1999 to 2003, and provided recommendations to the Commission on operational and technical parameters for use of the 700 MHz public safety band

.Excerpted from the proposed standard:

The six character name shall only be used in equipment that is not capable of implementing the eight character names. The standard naming format is as follows:

Btype##M

This format is broken down as follows:

B Spectrum Band

The Spectrum Band designator is a unique single alpha or numeric character to designate the public safety spectrum segment the channel is found within:

L	VHF Low Band (30 – 50 MHz)
V	VHF High Band (150.8 – 162.0 MHz) – Not used for channel names in six character format.
U	UHF Band (450 – 470 MHz) - Not used for channel names in six character format.
7	700 MHz Public Safety Narrowband Voice Band (769 – 775 / 799 – 805 MHz).
8	800 MHz NPSPAC band **after the rebanding process** (806 – 809 / 851 – 854 MHz) - Not used for channel names in six character format.

type Channel Use Designator

The Channel Use Designator is an alphanumeric three or four place tag to signify the primary purpose of operations on the channel. In some cases, the Channel Use has been specified in FCC Rules or related Orders. To facilitate the use of these Channel Names in older radios with only 6 characters available in the display, the first "Band" character is deleted, and the "**type** " Channel Use field is limited to the first 3 characters. Short Form names are not applicable to the 700 MHz Band since equipment for this band is new and does not have the character limitation.

8 Character Format	6 Character Format	Definition
CALL	CAL	Channel is dedicated nationwide for the express purpose of interoperability calling only.
DATA	DAT	Channel is reserved nationwide for the express purpose of data transmission only
FIRE	FIR	Primarily used for interagency incident communications by Fire licensees
GTAC	GTC	Primarily used for interagency incident communications between Public Safety eligible entities and eligible nongovernmental organizations
LAW	LAW	Primarily used for interagency incident communications by Police licensees
MED	MED	Primarily used for interagency incident communications by Emergency Medical Service licensees

MOB	MOB	Primarily used for on-scene interagency incident communications by any Public Safety eligible, using vehicular repeaters (FCC Station Class MO3)
TAC	TAC	Primarily used for interagency communications by any Public Safety eligible
TRVL	TRV	Primarily used for interagency communications by any Public Safety eligible to coordinate travel when responding to/from an incident outside of an agency's own jurisdiction

Unique Channel Identifier

The Unique Channel Identifier is a numeric one or two place tag to uniquely identify the specific channel. Channel Identifiers are grouped by band segment as follows:

1-9 VHF Low Band (30-50 MHz) [No leading zero used]
10-39 VHF High band (150.8 – 162 MHz)
40-49 UHF band (450 – 470 MHz)
50-89 700 MHz (769 – 775 / 799 – 805 MHz)
90-99 800 MHz "NPSPAC" band (806-809/851-854 MHz) [Post-rebanding]

Notes:
> • Starting in VHF High Band, Channel Identifiers are grouped by Channel Use type, with Channel Identifiers ending in "0" reserved for Interoperability Calling use.
> • Channels Identifiers specified for Emergency Medical Services ("MED") in this document are numbered to avoid conflict with the FCC's UHF medical channel naming methodology specified in 47CFR90.20(d)(65) and 47CFR90.20(d)(66)(i).
> • If a new frequency becomes available, it will be given the next unique channel identifier.

M Modifier

The Modifier character is a single alphanumeric tag to identify a modification to the default operation type on the channel/channel pair:

D   Direct or "Talk around" use [Simplex operations on the output channel of a pair normally designated for half-duplex or mobile relay operations.]

Standardized Tone Squelch or Network Access Codes

The use of a common Continuous Tone Controlled Squelch System (CTCSS) tone of 156.7 Hz for transmit and receive on national Interoperability Channels was originally specified in the NPSPAC proceedings (FCC Docket 87-112). In many areas, the 800 MHz Planning Regions allow the use of an additional (secondary) access tone for in-cabinet repeat operations by repeater stations, as long as the 156.7 Hz tone was monitored by a live dispatcher or always repeated upon receipt. 156.7 Hz shall always be transmitted by repeaters.

In the development process of the *Standard Channel Nomenclature for the Public Safety Interoperability Channels*, the 147 NCC Interoperability Committee's Working Group recommended that 156.7 Hz CTCSS transmit and receive be used for all analog voice operations on all interoperability channels in all bands. For P-25 voice operations, the NCC Working Group initially recommended the 156.7 Hz equivalent Network Access Code (NAC) of $61F. This recommendation was changed in 2001 to use the default ("carrier squelch equivalent") NAC of $293.

The NTIA has adopted 167.9 Hz as the common CTCSS tone to be used on NTIA analog interoperability frequencies. NTIA adopted a NAC of $68F for use on NTIA digital interoperability frequencies.

DIGITAL OPERATIONS

Network Access Code (NAC) $293 shall be used for all digital operations on FCC-designated Interoperability Channels where digital modulation is permitted or required, as follows:

> 1. Subject to the approval of applicable Statewide Communications Interoperability Plans and/or FCC-approved Regional Plans, mobile relay (repeater) stations that are part of a local, regional, or statewide interoperability network may be equipped with a second receive NAC to provide local ("in cabinet") mobile relay operation, provided:
>> a. The relay transmitter shall continue to transmit the Common NAC of $293 so that all users within range of the station are aware the station is in use;
>> b. The relay shall accept the Common NAC of $293 and present the audio accompanying the $293-encoded transmission for automatic in-cabinet repeat or to a live operator at the appropriate controlling dispatch facility; and
>> c. The operational configuration of the mobile relay station shall be published in applicable interoperability resource tracking documents (such as the appropriate Tactical Interoperability Communications Plan, Statewide Communications Interoperability Plan, and/or FCC-approved Regional Plan) and databases (CAPRAD, CASM, and NIIX).

> 2. NTIA Law Enforcement (LE) channels when operating in digital mode use NAC $68F. These LE channels all operate in digital mode except LE A, LE B, LE 1, LE 10 and LE 16 which operate in analog mode using 167.9 Hz TX CTCSS.

Subscriber Radio Programming

INTEROPERABILITY CHANNEL CONFIGURATIONS

Interoperability channels listed with both a mobile relay and a direct configuration should have both configurations of each channel programmed in each subscriber radio, regardless of the available infrastructure in the user's home area.

State and local public safety and public service agencies programming the NTIA VHF and UHF Law Enforcement and Incident Response channels into their subscriber equipment should partition those channels into a separate 'zone' or 'bank' designated as "FED" or "NTIA," while maintaining the NTIA Channel designation, as a method to avoid confusion on the user's part between the NTIA channels and any similarly designated local channels.

FREQ / FCC CHANNEL (SUBSCRIBER LOAD)		BASE,MOBILE, OR FIXED (REPEATER OR CONTROL)	ELIGIBILITY / PRIMARY USE	Original NCC N	COMMON NAME	LIMITATIONS (47 CFR Part 90)
RECEIVE						
CHANNEL	CHANNEL	FCC 700 MHz Public Safety Band (12.5 kHz Channels)				
769.14375	799.14375	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC58	**7TAC51**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC51D**	
769.24375	799.24375	Mobile-Fixed	Calling Channel	7CAL59	**7CALL50**	90.531(a)(1)(ii)
	SIMPLEX	Base-Fixed-Mobile			**7CALL50D**	
769.39375	799.39375	Mobile-Fixed	EMS	7MED60	**7MED65**	
	SIMPLEX	Base-Fixed-Mobile			**7MED65D**	
769.49375	799.49375	Mobile-Fixed	EMS	7EMS61	**7MED66**	
	SIMPLEX	Base-Fixed-Mobile			**7MED66D**	
769.64375	799.64375	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC62	**7TAC52**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC52D**	
769.74375	799.74375	Mobile-Fixed	General Public Safety Service	7TAC63	**7TAC55**	
	SIMPLEX	Base-Fixed-Mobile			**7TAC55D**	
769.89375	799.89375	Mobile-Fixed	Fire	7FIR64	**7FIRE63**	
	SIMPLEX	Base-Fixed-Mobile			**7FIRE63D**	
769.99375	799.99375	Mobile-Fixed	Fire	7FIR65	**7FIRE64**	
	SIMPLEX	Base-Fixed-Mobile			**7FIRE64D**	
770.14375	800.14375	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC66	**7TAC53**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC53D**	
770.24375	800.24375	Mobile-Fixed	General Public Safety Service	7TAC67	**7TAC56**	
	SIMPLEX	Base-Fixed-Mobile			**7TAC56D**	
770.39375	800.39375	Mobile-Fixed	Law Enforcement	7LAW68	**7LAW61**	
	SIMPLEX	Base-Fixed-Mobile			**7LAW61D**	
770.49375	800.49375	Mobile-Fixed	Law Enforcement	7LAW69	**7LAW62**	
	SIMPLEX	Base-Fixed-Mobile			**7LAW62D**	
770.64375	800.64375	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC70	**7TAC54**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC54D**	
770.74375	800.74375	Mobile-Fixed	Mobile Data	7DAT71	**7DATA69**	90.531(a)(1)(i)
	SIMPLEX	Base-Fixed-Mobile			**7DATA69D**	
770.89375	800.89375	Mobile-Fixed	Mobile Repeater *(M03 Use Primary)*	7MOB72	**7MOB59**	
	SIMPLEX	Base-Fixed-Mobile			**7MOB59D**	
770.99375	800.99375	Mobile-Fixed	Other Public Service	7TAC73	**7GTAC57**	
	SIMPLEX	Base-Fixed-Mobile			**7GTAC57D**	
773.00625	803.00625	Mobile-Fixed	EMS	7EMS76	**7MED86**	
	SIMPLEX	Base-Fixed-Mobile			**7MED86D**	
773.10625	803.10625	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC74	**7TAC71**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC71D**	
773.25625	803.25625	Mobile-Fixed	Calling Channel	7CAL75	**7CALL70**	90.531(a)(1)(ii)
	SIMPLEX	Base-Fixed-Mobile			**7CALL70D**	
773.35625	803.35625	Mobile-Fixed	EMS	7EMS77	**7MED87**	
	SIMPLEX	Base-Fixed-Mobile			**7MED87D**	
773.50625	803.50625	Mobile-Fixed	Fire	7FIR80	**7FIRE83**	
	SIMPLEX	Base-Fixed-Mobile			**7FIRE83D**	
773.60625	803.60625	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC78	**7TAC72**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC72D**	
773.75625	803.75625	Mobile-Fixed	General Public Safety Service	7TAC79	**7TAC75**	
	SIMPLEX	Base-Fixed-Mobile			**7TAC75D**	
773.85625	803.85625	Mobile-Fixed	Fire	7FIR81	**7FIRE84**	
	SIMPLEX	Base-Fixed-Mobile			**7FIRE84D**	
774.00625	804.00625	Mobile-Fixed	Law Enforcement	7LAW84	**7LAW81**	
	SIMPLEX	Base-Fixed-Mobile			**7LAW81D**	
774.10625	804.10625	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC82	**7TAC73**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC73D**	
774.25625	804.25625	Mobile-Fixed	General Public Safety Service	7TAC83	**7TAC76**	
	SIMPLEX	Base-Fixed-Mobile			**7TAC76D**	
774.35625	804.35625	Mobile-Fixed	Law Enforcement	7LAW85	**7LAW82**	
	SIMPLEX	Base-Fixed-Mobile			**7LAW82D**	
774.50625	804.50625	Mobile-Fixed	Mobile Repeater *(M03 Use Primary)*	7MOB88	**7MOB79**	
	SIMPLEX	Base-Fixed-Mobile			**7MOB79D**	
774.60625	804.60625	Mobile-Fixed	*General Public Safety Service (secondary trunked)*	7TAC86	**7TAC74**	90.531(a)(1)(iii)
	SIMPLEX	Base-Fixed-Mobile			**7TAC74D**	
774.75625	804.75625	Mobile-Fixed	Mobile Data	7DAT87	**7DATA89**	90.531(a)(1)(i)
	SIMPLEX	Base-Fixed-Mobile			**7DATA89D**	
774.85625	804.85625	Mobile-Fixed	Other Public Service	7TAC89	**7GTAC77**	
	SIMPLEX	Base-Fixed-Mobile			**7GTAC77D**	